



Note: 50-ampere 125/250-volt receptacle and attachment plug cap configurations, 3-pole, 4-wire, grounding types used for manufactured home supply cords and manufactured home parks. Complete details of the 50-ampere cap and receptacle can be found *Wiring Device Dimensional Requirements* (ANSI/NEMA WD-6-1997).

Figure 1 to paragraph (f)

(i) Where the cord passes through walls or floors, it must be protected by means of conduits and bushings or the equivalent. The cord is permitted to be installed within the manufactured home walls, provided that a continuous raceway having a maximum size of 1¼ inch is installed from the branch-circuit panelboard to the underside of the manufactured home floor.

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(2) A listed metal raceway or listed rigid nonmetallic conduit from the disconnecting means in the manufactured home to the underside of the manufactured home, with provisions for the attachment of a suitable junction box or fitting to the raceway on the underside of the manufactured home. The manufacturer must provide written installation instructions stating the proper feeder conductor sizes for the raceway and the size of the junction box to be used; or

(3) Service equipment installed in or on the manufactured home, provided that all of the following conditions are met:

(i) In its written installation instructions, the manufacturer must include information indicating that the home must be secured in place by an anchoring system or installed on and secured to a permanent foundation;

(ii) The installation of the service equipment complies with Article 230 of the National Electrical Code, NFPA 70-2005 (incorporated by reference, see § 3280.4). Exterior service equipment or the enclosure in which it is to be installed must be weatherproof, and conductors must be suitable for use in wet locations;

(iii) Means are provided for the connection of the grounding electrode conductor to the service equipment and routing it to the conductor outside the structure;

(iv) Bonding and grounding of the service must be in accordance with Article 250, NFPA 70-2005, National Electrical Code (incorporated by reference, see § 3280.4);

(v) The manufacturer must include in its installation instructions one method of grounding the service equipment at the installation site. The instructions must clearly state that other methods of grounding are found in Article 250 of NFPA 70-2005, National Electrical Code;

(vi) The minimum size grounding electrode conductor must be specified in the instructions; and

(vi) A red warning label must be mounted on or adjacent to the service equipment. The label must state the following: WARNING—DO NOT PROVIDE ELECTRICAL POWER UNTIL THE GROUNDING ELECTRODE(S) IS INSTALLED AND CONNECTED (SEE INSTALLATION INSTRUCTIONS).

§ 3280.804 Disconnecting means and branch-circuit protective equipment.

(a) The branch-circuit equipment is permitted to be combined with the disconnecting means as a single assembly. Such a combination is permitted to be designated as a distribution panelboard. If a fused distribution panelboard is used, the maximum fuse size of the mains must be plainly marked with lettering at least ¼-inch high and that is visible when fuses are changed. (See Article 110.22 of NFPA 70-2005, National Electrical Code, concerning identification of each disconnecting means and each service, feeder, or branch circuit at the point where it originated and the type marking needed.)

(b) Plug fuses and fuseholders shall be tamper-resistant, Type “S,” enclosed in dead-front fuse panelboards. Electrical distribution panels containing circuit breakers shall also be dead-front type.

(c) Disconnecting means. A single disconnecting means shall be provided in each manufactured home consisting of a circuit breaker, or a switch and fuses and their accessories installed in a readily accessible location near the point of entrance of the supply cord or conductors into the manufactured home. The main circuit breakers or fuses shall be plainly marked “Main.” This equipment shall contain a solderless type of grounding connector or bar for the purposes of grounding with sufficient terminals for all grounding conductors. The neutral bar termination of the grounded circuit conductors shall be insulated.

(d) The disconnecting equipment shall have a rating suitable for the connected load. The distribution equipment, either circuit breaker or fused type, shall be located a minimum of 24 inches from the bottom of such equipment to the floor level of the manufactured home.

(e) A distribution panelboard employing a main circuit breaker shall be rated 50 amperes and employ a 2-pole circuit breaker rated 40 amperes for a 40-ampere supply cord, or 50 amperes for a 50-ampere supply cord. A distribution panelboard employing a disconnect switch and fuses shall be rated 60 amperes and shall employ a single 2-pole, 60-ampere fuseholder with 40- or 50-ampere main fuses for 40- or 50-ampere supply cords, respectively. The outside of the distribution panelboard shall be plainly marked with the fuse size.

(f) The distribution panelboard shall not be located in a bathroom, or in any other inaccessible location, but shall be permitted just inside a closet entry if the location is such that a clear space of 6 inches to easily ignitable materials is maintained in front of the distribution panelboard, and the distribution panelboard door can be extended to its full open position (at least 90 degrees). A clear working space at least 30 inches wide and 30 inches in front of the distribution panelboard

shall be provided. This space shall extend from floor to the top of the distribution panelboard.

(g) Branch-circuit distribution equipment shall be installed in each manufactured home and shall include overcurrent protection for each branch circuit consisting of either circuit breakers or fuses.

(1) The branch circuit overcurrent devices shall be rated:

(i) Not more than the circuit conductors; and

(ii) Not more than 150 percent of the rating of a single appliance rated 13.3 amperes or more which is supplied by an individual branch circuit; but

(iii) Not more than the fuse size marked on the air conditioner or other motor-operated appliance.

(h) A 15-ampere multiple receptacle shall be acceptable when connected to a 20-ampere laundry circuit.

(i) When circuit breakers are provided for branch-circuit protection 240 circuits shall be protected by 2-pole common or companion trip, or handle-tied paired circuit breakers.

(j) A 3 inch by 1-3/4 inch minimum size tag made of etched, metal-stamped or embossed brass, stainless steel, anodized or alclad aluminum not less than 0.020 inch thick, or other approval material (e.g., 0.005 inch plastic laminates) shall be permanently affixed on the outside adjacent to the feeder assembly entrance and shall read: This connection for 120/240 Volt, 3-Pole, 4-Wire, 60 Hertz, _____ Ampere Supply. The correct ampere rating shall be marked on the blank space.

(k) When a home is provided with installed service equipment, a single disconnecting means for disconnecting the branch circuit conductors from the service entrance conductors must be provided in accordance with Article 230, Part VI of the National Electrical Code, NFPA No. 70-2005. The disconnecting means shall be listed for use as service equipment. The disconnecting means may be combined with the disconnect required by § 3280.804(c). The disconnecting means shall be rated not more than the ampere supply or service capacity indicated on the tag required by paragraph (l) of this section.

(1) When a home is provided with installed service equipment, the electrical nameplate required by § 3280.804(j) shall read: “This connection for 120/240 volt, 3 pole, 3 wire, 60 Hertz, _____ Ampere Supply.” The correct ampere rating shall be marked in the blank space.

[40 FR 58752, Dec. 18, 1975, as amended at 42 FR 961, Jan. 4, 1977. Redesignated at 44 FR 20679, Apr. 6, 1979, as amended at 52 FR 4589, Feb. 12, 1987; 58 FR 55019, Oct. 25, 1993; 70 FR 72051, Nov. 30, 2005]

EFFECTIVE DATE NOTE: At 78 FR 73990, Dec. 9, 2013, § 3280.804 was amended by revising paragraphs (a), (c), (e), and (f), effective June 6, 2014. For the convenience of the user, the revised text is set forth as follows:

§ 3280.804 Disconnecting means and branch-circuit protective equipment.

(a) The branch-circuit equipment is permitted to be combined with the disconnecting means as a single assembly. Such a combination is permitted to be designated as a distribution panelboard. If a fused distribution panelboard is used, the maximum fuse size for the mains shall be plainly marked, with the lettering at least 1/4-inch high and visible when fuses are changed. See Article 110-22 of NFPA 70-2005, National Electrical Code (incorporated by reference, see § 3280.4), concerning the identification of each disconnecting means and each service, feeder, or branch circuit at the point where it originated, and the type of marking needed.

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(c) *Disconnecting means.* A single disconnecting means must be provided in each manufactured home, consisting of a circuit breaker, or a switch and fuses and its accessories, installed in a readily accessible location near the point of entrance of the supply cord or conductors into the manufactured home. The main circuit breakers or fuses must be plainly marked “Main.” This equipment must contain a solderless type of grounding connector or bar for the purposes of grounding, with sufficient terminals for all grounding conductors. The neutral bar termination of the grounded circuit conductors must be insulated in accordance with § 3280.809(b).

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(e) A distribution panelboard employing a main circuit breaker must be rated not less than 50 amperes and employ a 2-pole circuit breaker rated 40 amperes for a 40-ampere supply cord, or 50 amperes for a 50-ampere supply cord. A distribution panelboard em-

ploying a disconnect switch and fuses must be rated not less than 60 amperes and must employ a single, 2-pole fuseholder rated not less than 60-amperes with 40- or 50-ampere main fuses for 40- or 50-ampere supply cords, respectively. The outside of the distribution panelboard must be plainly marked with the fuse size.

(f) The distribution panelboard must be located in an accessible location, and must not be located in a bathroom or a clothes closet. A clear working space at least 30 inches wide and 30 inches in front of the distribution panelboard must be provided. This space must extend from the floor to the top of the distribution panelboard. Where used as switches, circuit breakers must be installed so that the center of the grip of the operating handle of the circuit breaker, when in its highest position, will not be more than 6 feet, 7 inches above the floor.

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§ 3280.805 Branch circuits required.

(a) The number of branch circuits required shall be determined in accordance with the following:

(1) Lighting, based on 3 volt-amperes per square foot times outside dimensions of the manufactured home (cupler excluded) divided by 120 volts times amperes to determine number of 15 or 20 ampere lighting area circuits. e.g. $[3 \times \text{length} \times \text{width} - [120 \times (15 \text{ or } 20)]]$ = number of 15 or 20 ampere circuits.

(2) *Small appliances.* For the small appliance load in kitchen, pantry dining room and breakfast rooms of manufactured homes, two or more 20-ampere appliance branch circuits, in addition to the branch circuit specified in § 3280.805(a)(1), shall be provided for all receptacle outlets in these rooms, and such circuits shall have no other outlets. Receptacle outlets supplied by at least two appliance receptacle branch circuits shall be installed in the kitchen.

(3) *General appliances (Including furnace, water heater, range, and central or room air conditioner, etc.).* There shall be one or more circuits of adequate rating in accordance with the following:

(i) Ampere rating of fixed appliances not over 50 percent of circuit rating if lighting outlets (receptacles, other than kitchen, dining area, and laundry, considered as lighting outlets) are on same circuit;